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Commissioner for Patents
PO BOX 1450
Alexandria VA 22313-1450

Sir:

I hereby certify that the complete attached response / document is being deposited with the United States Postal Service as EXPRESS mail article number ET418472911US, Post Office to Addressee, with sufficient postage pre-paid in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria VA 22313-1450

on this date: Jan 21, 2004

Signature: 
Brad A. Armstrong

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patent
PO BOX 1450
Alexandria VA 22313-1450

Re: Patent Application of Brad A. Armstrong

Serial No.: 09/754,477

Filed: 01/04/2001

Applicant's file no. F35

Correspondence mailing address: Brad A. Armstrong
P.O. Box 1419
Paradise, CA 95967

Title: COMPUTER MOUSE WITH SPECIALIZED BUTTON(S)

Examiner: Nguyen, Kevin M.

GAU: 2674

Dear Sir:

This Information Disclosure Statement (IDS) is being filed with the fee payment of \$180.00 so that the information will be considered by the PTO.

The following sections below address disclosures of prior art and relevant art that may pertain to the claims of this application.

1. As part of this Information Disclosure Statement are listings on modified 1449 forms of : A) US Patent References, B) Foreign Patent References, C) Non Patent Disclosures and Other References, and D) US Patent Application Publications.

Best full or partial copies which Applicant currently possesses of each of the Foreign Patent References and Non Patent Disclosures and Other References are included herewith. Applicant understands that the PTO now supplies its own copies of the US Patents and US Patent Applications cited in new patent applications. If this is not correct and Applicant is required to acquire paper copies from the PTO and then supply them to the PTO, please inform Applicant as soon as possible so that the copies can be ordered from the PTO and sent back to the PTO. Thank you.

The Foreign Patent References are in some cases foreign patents and in other cases patent applications.

For the Examiner's convenience, each of the four (A-D) above described lists includes a column with heading of "Previously Submitted" wherein a "yes" is applied in that column next to each reference which was Previously Submitted. If there is no "yes" in that column then the reference is herein Newly submitted. Please consider all Previously and Newly submitted references during the examination of the present application and claims.

Each of the four above described lists includes references to Footnotes of Special Interest. The "Footnotes-References of Special Interest" are included to provide assistance to the Examiner while determining allowability of the claims. The Footnotes mainly pertain to Office Actions. So that the Examiner may be

fully informed of all objections made in the past by any Patent Examiner against any of Applicant's claims, Applicant herein includes a copy of each Office Action regarding Applicant's other Patent Applications wherein an Examiner relied upon the "special interest" identified reference art as indicating lack of novelty or indicating obviousness either alone or in combination for the then claimed invention. Many of these objections were later found by the Examiner of record to be overcome resulting in issuance of a U.S. Patent, but only the objections are listed here for the sake of brevity and so that the current Examiner can be fully informed of all arguments made in the past by other PTO Examiners against Applicant's claims. The current Examiner is requested to contact Applicant if Applicant can answer any questions regarding any of these Office Actions or the inventions to which they pertain.

2. Applicant has also provided the below comments and included photographs regarding products once on the market. One such product is the CyberMan™ controller first sold in 1993 in the USA by Logitech Inc. 6505 Kaiser Dr., Fremont CA USA. Applicant believes he is the inventor of the CyberMan controller which was made without his permission after failed licensing negotiations regarding Applicant's US Patent Application No. 07/847,619 now Patent 5,589,828. Applicant believes an element disclosed in the CyberMan that was not taught in the '828 Patent is the membrane element. Membrane elements are taught in Applicant's US Patent Application No. 08/677,378 filed July 5, 1996. It appears to Applicant that the "one year bar" rule applies to the membrane connection of sensors as disclosed in CyberMan. Nevertheless the '378 Patent Application teaches a great variety of novel and unobvious utilizations of a membrane in unique combination with many important elements. Additionally the '378 application teaches many elements in inventive combination, numerous structural variations and inventive leaps; both with and without the cost saving advantages taught in the '378 application of the membrane connecting to the circuit board without the expensive wiring harness of CyberMan. Many embodiments of the '378 application do not require use of a

membrane to be novel and inventive. And many embodiments of the '378 application having a membrane are novel and inventive over the CyberMan disclosure.

Located at the top of the stack of Reference Art copies is a CyberMan disclosure containing 1) an advertisement flyer with the heading CyberMan 3D Controller and 2) photographs 1, 2 and 3 of the CyberMan Controller assembled and also disassembled. Photograph 1 shows the CyberMan in a top perspective view and showing a base, a handle and three buttons. Photograph 2 shows a portion of the CyberMan in a disassembled state and showing the handle, three buttons, a microswitch for one of the buttons, a wiring harness spanning between a membrane located in the handle and a circuit board located in the base. The three buttons each use normally-open momentary-On switches. No proportional pressure-sensors are used. Movement of the major plate is tracked by two bi-directional slide potentiometers (variable resistors), all other sensors are uni-directional sensors of a momentary-On On/Off only type. The major plate is moveable in two-axes. Photograph 3 shows a portion of the CyberMan in a disassembled state. Shown in photograph 3 is the handle in an upside-down position and having a motor with offset weight for providing active tactile feedback. Four metal dome On/Off switches on a 1st plane (two axes input), and two more On/Off switches located on a third and fourth planes (third axis) are all integrated with the flexible membrane. The membrane further has solder connections to two metal dome On/Off switches (fourth axis) and solder connections to the three On/Off microswitches associated with the finger depressible buttons.

The membrane is located in the handle and the circuit board is located in the base. The expensive conventional wiring harness spans between the membrane in the handle and the circuit board in the base. The membrane does not physically engage, contact or connect to the circuit board. The membrane does not touch the circuit board and does not lay adjacent to the circuit board.

The membrane is not adhered to the circuit board, directly connected to the circuit board, or otherwise in close proximity to the circuit board. All metal domes and physical switch packages are located on only one side of the membrane.

Regarding the circuit board, two sensors are located on only one side of the circuit board (the two bi-directional sliding potentiometers or variable resistors) the second side of the circuit board has no sensors located on it.

The Examiner is respectfully requested to examine the claims in light of the CyberMan disclosure which the Applicant has described herein and included photographs for the Examiner's consideration. If the Examiner needs any additional information regarding CyberMan please contact Applicant or Logitech at the above listed address, or Applicant would be glad to supply a working example of the CyberMan (with screwdriver included:-) for the Examiner.

3. Another product on or once on the market is a video game controller manufactured by Namco Ltd. The Namco controller is believed to have been the controller that was referred to as the "NEO GEO" controller in Application No. 08/942,450 now Patent 6,102,802, in paper no. 3, a Preliminary Amendment dated July 7, 1999 by the PTO and cited by Applicant at that time for an example of a two hand held controller with an analog button in the right hand area. The Namco controller has POSITIONAL button sensors which were critically differentiated from Applicant's PRESSURE button sensors resulting in the now issued U.S. Patent 6,102,802. Of interest to the present claims the Namco controller is an image controller utilizing four rotary potentiometers. The printed material associated with the Namco controller has a copyright date of 1994 which Applicant assumes is the first time of sale to the public. Three photographs are included of the Namco controller.

Photograph 1 is of the top of the controller. In the left hand area is positioned a four-way cross key or rocker for operation by the user's left hand thumb. The rocker actuates four normally-open momentary-On On/Off only

switches. Two shoulder buttons are positioned for operation one each for the user's right and left hand index fingers. Four individual buttons are embodied in the right hand area for operation by the right hand thumb. Two of the four buttons are normally-open momentary-On On/Off only switches. The other two of the buttons on the right hand area of the Namco controller are buttons structured to drive gears to rotate potentiometers. These gear-drive buttons are depressible only in a linear fashion, the buttons themselves do not pivot or rotate.

Photograph 2 is a picture of the Namco controller in an upside-down position with a housing bottom panel removed on the right hand side of the controller in order to show internal components associated with the two gear-drive buttons. The buttons rest on metal coil compression springs and the human user can depress the buttons with his right thumb. The metal coil springs return the buttons to a normally extended or raised position. The buttons are connected to rack and pinion gears to translate the linear travel of the buttons into rotation of a pinion gear, and the pinion gear is connected to the rotary shaft of an electrical rotary potentiometer.

Photograph 3 is a picture of the Namco controller in an upside-down position with both housing bottom panels removed to show the internal components of the controller. Four rotary potentiometers are utilized. The first and second rotary potentiometers are as described in Photograph 2 above. The third rotary potentiometer is utilized with a similar rack and pinion type gearing with an individual button, this button being the shoulder button depressible by the user's left hand index finger. The fourth rotary potentiometer has planetary type gearing for sensing the articulation between the right and left hand areas of the Namco case. Of interest the three rotary potentiometers associated with depressible buttons are not embodied to act as bi-directional sensors as defined in the current specification. In contrast the fourth rotary potentiometer is embodied in the Namco controller as a bi-directional sensor, for example, the two case halves of the Namco controller can be rotated in two separate directions for the normally resting position. The Namco controller also has three circuit boards.

The Namco controller does not have a flexible membrane connecting to any circuit board. The Namco controller does not have a flexible membrane bearing circuitry. The Namco controller does not have any structure for active tactile feedback. The Namco controller does not have a motor and offset weight. The Namco controller does not have any pressure sensors. The Namco controller does not have pressure sensors associated with individual buttons. The Namco controller does not have any pivotal or rotary buttons. The Namco controller does not have any single element structured to activate more than one rotary potentiometer.

4. Language in Applicant's specification includes "snap-through" or "break-over" or "threshold" tactile feedback or the like, describing a passive tactile feedback feature applied in combination with an analog variable output sensor, that combination possibly to be inserted into the claims in this Application or a Continuation application in the future. Relevant to the passive tactile feedback with variable output sensor feature is U.S. Patent 4,786,764 issued to Padula, et al on Nov. 22, 1988 for the invention entitled DIGITIZER STYLUS WITH PRESSURE TRANSDUCER. The Padula patent describes an elongated stylus held in one hand similar to a pen or pencil for writing on an electronic digitizer tablet. One primary problem sought to be solved by Padula is the elimination of spurious data inputs during signature verification from less than adequate pressing force by the human hand of the stylus tip against the digitizer tablet. To solve that problem Padula describes use of a pressure switch which includes a transducer in the form of an ink layer having electrical resistance which varies as a function of pressure. The transducer material is in contact with circuitry on a flexible material sheet. The pressure switch is located in the stylus wherein the force against the stylus tip is applied to the transducer. The variable output (analog output) of the pressure switch is read by processing electronics. The analog output changes with increasing force against the stylus, and when a threshold level change is detected data flow from the stylus is allowed. A

collapsible dome of metal in the stylus is arranged to collapse with snap action and provide tactile feedback to the user when the predetermined force is obtained. When pressure is removed from the stylus tip, the dome snaps back to its original undeformed state, ready for the next operation. Thus while in one embodiment the pressure switch is described or used as an On and Off switch with the stylus actuated with sufficient force and deactivated with less force against the tip, Padula et al also detail that this analog signal can be used advantageously in mechanical or electrical drawing, where varying force indicates the use of or need for lines of varying thickness, for example, when digitizing a blueprint or circuit, in addition to the use already noted in connection with signature verification. In another embodiment of the invention, the part which is displaceable against the transducer when the pressure is applied to the stylus tip is resilient and rounded, whereby the area of the part pressed against the transducer increases as the pressure increases. The change in resistance in this case is a function of both the pressure and the change in the surface area of contact between the displaceable part and the transducer. The Examiner is requested to read Padula for any additional relevant details. Thank you.

US Patent 5,164,697 to Kramer describing an "INPUT KEYBOARD FOR AN ELECTRONIC APPLIANCE IN ENTERTAINMENT ELECTRONICS" (the title) includes the word "snap" twice in the disclosure. Once in column 1 lines 10-35 and again in column 5, lines 35-51. In Applicant's opinion, the snap or snap effect in the Kramer U.S. Patent 5,164,697 in each of the two occurrences refers only to the rapid or quick movement of the contacts relative to each other, and has nothing to do with tactile feedback to the user. A third party, during licensing negotiations with Applicant, asserted the snap in Kramer was a description of tactile feedback, however, Applicant disagrees. The Examiner is requested to read Kramer for himself regarding such aspects. Thank you.

5. Please consider the issue of double-patenting regarding this application and all of Applicant's other pending U.S. applications which can be readily

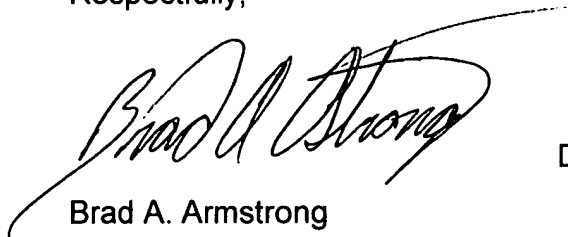
located by a search of the PTO records for pending applications under the Inventor name of "Brad A. Armstrong". If the Examiner wishes and requests such, Applicant would be more than willing to submit copies of all of his currently pending claims. Applicant would be happy to discuss each claim with the Examiner. If the Examiner believes that would be helpful, please do not hesitate in requesting such from Applicant. Thank you.

6. Also, please consider the issue of double-patenting regarding this application and all of Applicant's Issued U.S. Patents which can be readily located by a search of the PTO records for issued patent under the Inventor name of "Brad A. Armstrong". If the Examiner wishes additional information, please do not hesitate in requesting such from Applicant. Thank you.

Applicant realizes this IDS is extensive and sincerely apologizes to the Examiner. The legal system regarding prior art disclosure, as presently determined by the courts, is a harsh master – expensive, time consuming and difficult – for an inventor who only wants to enjoy the fruit of his invention. Please examine the claims thoroughly so that Applicant may receive a valid and worthy Patent. Thank you for your time.

Please do not hesitate in requesting anything from Applicant that might assist the Examiner.

Respectfully,



Brad A. Armstrong

Date: Jan 21, 2004

Footnotes – References of Special Interest

Re: Patent Application of Brad A. Armstrong
 Serial No.: 09/754,477
 Filed: Jan. 4, 2001
 Applicant's file no. F35
 Correspondence mailing address: Brad A. Armstrong
 P.O. Box 1419
 Paradise, CA 95967
 Title: COMPUTER MOUSE WITH SPECIALIZED BUTTON(S)
 Examiner: Nguyen, K.
 GAU: 2674

Footnote numbers:

1 Inventor King, US Patent Number 4555960 published on 12/3/1985 was relied upon against applicant's US patent application serial number 07/847619 in the Office Action dated 5/17/1994. In that Office Action on pages 9-14 Examiner A. Hill asserted a 35 USC 102 rejection in sections 5-6 and a 35 USC 103 rejection in sections 7-10.

1 Inventor King, US Patent Number 4555960 published on 12/3/1985 was relied upon against applicant's patent application serial number 07/847619 in the Office Action dated 9/28/1994. In that Office Action on pages 6-11 Examiner A. Hill asserted a 35 USC 103 rejection in sections 7-8.

1 Inventor King, US Patent Number 4555960 published on 12/3/1985 was relied upon against applicant's patent application serial number 07/847619 in the Office Action dated 5/11/1995. In that Office Action on pages 11-17 Examiner A. Hill asserted a 35 USC 103 rejection in sections 10-11.

1 Inventor King, US Patent Number 4555960 published on 12/3/1985 was relied upon against applicant's patent application serial number 07/847619 in the Office Action dated 8/10/1995. In that Office Action on pages 17-32 Examiner A. Hill asserted a 35 USC 102 rejection in section 9 and a 35 USC 103 rejection in sections 11-17.

2 The IBM Technical Disclosure Bulletin Vol. 32 No. 9B "Mouse Ball-Actuating Device With Force and Tactile Feedback" pages 230-235 published 2/1/1990 was relied upon against applicant's patent application No. 07/847619 in the Office Action dated 5/17/1994. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in sections 7-10 on pages 10-13.

2 The IBM Technical Disclosure Bulletin Vol. 32 No. 9B "Mouse Ball-Actuating Device With Force and Tactile Feedback" pages 230-235 published 2/1/1990 was relied upon against applicant's patent application No. 07/847619 in the Office Action dated 9/28/1994. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in sections 7-8 on pages 6-11.

2 The IBM Technical Disclosure Bulletin Vol. 32 No. 9B "Mouse Ball-Actuating Device With Force and Tactile Feedback" pages 230-235 published 2/1/1990 was relied upon against applicant's patent application No. 07/847619 in the Office Action dated 5/11/1995. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in sections 10-11 on pages 11-17.

2 The IBM Technical Disclosure Bulletin Vol. 32 No. 9B "Mouse Ball-Actuating Device With Force and Tactile Feedback" pages 230-235 published 2/1/1990 was relied against applicant's patent application No. 07/847619 in the Office Action dated 8/10/1995. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in sections 11-15 on pages 20-29.

3 Inventors Frank et al in US Patent 5252952 issued 10/1/1993 was relied upon against applicant's patent application no. 07/847619 in an Office Action dated 5/17/1994. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in sections 9-10 on pages 12-13.

3 Inventors Frank et al in US Patent 5252952 issued 10/1/1993 was relied upon against applicant's patent application no. 07/847619 in an Office Action dated 9/28/1994. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in sections 7-8 on pages 6-11.

3 Inventors Frank et al in US Patent 5252952 issued 10/1/1993 was relied upon against applicant's patent application no. 07/847619 in an Office Action dated 5/11/1995. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in sections 10-11 on pages 11-17.

3 Inventors Frank et al in US Patent 5252952 issued 10/1/1993 was relied upon against applicant's patent application no. 07/847619 in an Office Action dated 8/10/1995. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in sections 14-17 on pages 24-32.

4 Patent document No. EP0205726 of Nakamura published 12/30/1986 was relied upon against applicant's patent application no. 07/847619 in an Office Action dated 5/17/1994. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in section 10 on pages 13-14.

5 Inventor Kley, US Patent 4935728 issued 6/1/1990 was relied upon against applicant's patent application No. 07/847619 in an Office Action dated 9/28/1994. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in section 7-8 on pages 6-11.

5 Inventor Kley, US Patent 4935728 issued 6/1/1990 was relied upon against applicant's patent application No. 07/847619 in an Office Action dated 8/10/1995. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in section 14-17 on pages 24-32.

6 Inventors Dzholdasbekov et al, patent document GB2240614 published Aug. 7, 1991 was relied upon against applicant's application no. 07/847619 in an Office Action dated 5/11/1995. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in section 10-11 on pages 11-17.

6 Inventors Dzholdasbekov et al, patent document GB2240614 published Aug. 7, 1991 was relied upon against applicant's application no. 07/847619 in an Office Action dated 08/10/1995. In that Office Action Examiner A. Hill asserted a 35 USC 102 rejection in sections 7-8 and a 35 USC 103 rejection in section 1, 13 on pages 20-32.

7 Inventor Menahem, US Patent 5142931 issued 9/1/1992 was relied upon against applicant's patent application 07/847619 in an Office Action dated 8/10/1995. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in section 14-17 on pages 24-32.

8 Inventor Thomas, Jr., US Patent 5128671 issued 7/7/1992 was relied upon against applicant's application no. 07/847619 in an Office Action dated 8/10/1995. In that Office Action Examiner A. Hill asserted a 35 USC 103 rejection in section 16-17 on pages 29-32.

9 The product "Cyberman" is a controller sold to the public in 1993 by Logitech and which was relied upon against applicant's US Patent application no. 08/393459 in an Office Action dated 7/5/1995. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in section 3 pages 2-4. Also, the resultant Patent from application no. 08/393459 listed the product as "Gyberman" instead of the correct name of Cyberman.

10 Inventor Wislocki, US Patent 4933670 issued 6/12/1990 was relied upon against applicant's patent application no. 08/393459 in an Office Action dated 7/5/1995. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in section 3 pages 2-4.

10 Inventor Wislocki, US Patent 4933670 issued 6/12/1990 was relied upon against applicant's patent application no. 08/393459 in an Office Action dated 12/11/1995. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in sections 4-6 pages 2-5.

11 Inventor Leung, US Patent 4924216 issued 5/8/1990 was relied upon against application application no. 08/393459 in an Office Action dated 12/11/1995. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in section 5 page 4.

12 The article "Development of a General Purpose Hand Controller for Advanced Teleoperation", KV Siva, Harwell Laboratory, UK, July 1988 was relied upon against applicant's patent application no. 08/393459 in an Office Action dated 12/11/1995. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in sections 4-6 pages 2-5.

13 Inventor Garrett, US Patent 5065146 issued 11/12/1991 was relied upon against applicant's patent application 08/393459 in an Office Action dated 12/11/1995. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in section 6 pages 4-5.

14 Inventors Hoyt et al, US Patent 5687080 issued 11/11/1997 was relied upon against applicant's US Patent application No. 08/677378 in an Office Action dated 3/23/1998. In that Office Action Examiner J. Suraci asserted a 35 USC 102 rejection in section 2 and a 35 USC 103 rejection in section 4 pages 1-2.

14 Inventors Hoyt et al, US Patent 5687080 issued 11/11/1997 was relied upon against applicant's US Patent application No. 08/677378 in an Office Action dated 6/26/1998. In that Office Action Examiner J. Suraci asserted a 35 USC 102 rejection in section 4 and a 35 USC 103 rejection in section 6 pages 3-4.

14 Inventors Hoyt et al, US Patent 5687080 issued 11/11/1997 was relied upon against applicant's US Patent application No. 08/677378 in an Office Action dated 9/30/1999. In that Office Action Examiner J. Brier asserted a 35 USC 102 rejection in section 9 and a 35 USC 103 rejection in section 14 pages 5-6.

14 Inventors Hoyt et al, US Patent 5687080 issued 11/11/1997 was relied upon against applicant's US Patent application No. 08/677378 in an Office Action dated 3/13/2000. In that Office Action Examiner J. Brier asserted a 35 USC 103 rejection in section 5 page 3.

14 Inventors Hoyt et al, US Patent 5687080 issued 11/11/1997 was relied upon against applicant's US Patent application No. 08/677378 in an Office Action dated 8/31/2000. In that Office Action Examiner J. Brier asserted a 35 USC 103 rejection in sections 12-13 pages 5-6.

15 Inventors Yoshida et al, US Patent 5250930 issued 10/5/1993 was relied upon against applicant's US patent application 08/677378 in an Office Action dated 3/23/1998. In that Office Action Examiner J. Suraci asserted a 35 USC 103 rejection in section 4 page 2.

15 Inventors Yoshida et al, US Patent 5250930 issued 10/5/1993 was relied upon against applicant's US patent application 08/677378 in an Office Action dated 6/26/1998. In that Office Action Examiner J. Suraci asserted a 35 USC 103 rejection in section 6 page 4.

15 Inventors Yoshida et al, US Patent 5250930 issued 10/5/1993 was relied upon against applicant's US patent application 08/677378 in an Office Action dated 9/30/1999. In that Office Action Examiner J. Brier asserted a 35 USC 103 rejection in section 14 page 6.

15 Inventors Yoshida et al, US Patent 5250930 issued 10/5/1993 was relied upon against applicant's US patent application 08/677378 in an Office Action dated 3/13/2000. In that Office Action Examiner J. Brier asserted a 35 USC 103 rejection in section 5 page 3.

16 Inventor Duimel, US Patent 4879556 issued 11/7/1989 was relied upon against applicant's US patent application 08/677378 in an Office Action dated 9/30/1999. In that Office Action Examiner J. Brier asserted a 35 USC 102 rejection in section 10 page 5.

17 Inventors Engle et al, US Patent 5889507 issued 3/30/1999 was relied upon against applicant's US patent application 08/677378 in an Office Action dated 9/30/1999. In that Office Action Examiner J. Brier asserted a 35 USC 102 rejection in section 11 page 6.

17 Inventors Engle et al, US Patent 5889507 issued 3/30/1999 was relied upon against applicant's US patent application 10/042,027 in an Office Action dated 12/4/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 2-3 pages 2-4.

18 Inventors Brandenburg et al, US Patent 5231386 issued 7/24/1990 was relied upon against applicant's US patent application 08/677378 in an Office Action dated 9/30/1999. In that Office Action Examiner J. Brier asserted a 35 USC 102 rejection in section 12 page 6.

18 Inventors Brandenburg et al, US Patent 5231386 issued 7/24/1990 was relied upon against applicant's US patent application 08/677378 in an Office Action dated 8/31/2000. In that Office Action Examiner J. Brier asserted a 35 USC 102 rejection in section 7 and a 35 USC rejection in sections 10, 12 pages 4-6.

19 Inventor Sekine, US Patent 5898425 issued 4/27/1999 was relied upon against applicant's US patent application 08/677378 in an Office Action dated 8/31/2000. In that Office Action Examiner J. Brier asserted a 35 USC 102 rejection in section 8 and a 35 USC rejection in sections 11, 13 pages 4-6.

19 Inventor Sekine, US Patent 5898425 issued 4/27/1999 was relied upon as a PCT "X" reference (lack of novelty indicated by "X") against applicant's PCT application NO. PCT/US99/28913 in a report dated April 19, 2002 by Examiner J. Brier.

20 Inventors Inoue et al, US Patent 5207426 issued 5/4/1993 was relied upon against Applicant's US Patent application No.08/942450 in an Office Action dated 8/18/1999. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 2 pages 2-3.

20 Inventors Inoue et al, US Patent 5207426 issued 5/4/1993 was relied upon against Applicant's US Patent application No. 10/164684 in an Office Action dated 2/6/2003. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 2 pages 2-3.

20 Inventors Inoue et al, US Patent 5207426 issued 5/4/1993 was relied upon against Applicant's US Patent application No. 09/510572 in an Office Action dated 2/13/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 5 pages 3-4.

20 Inventors Inoue et al, US Patent 5207426 issued 5/4/1993 was relied upon against Applicant's US Patent application No. 10/042027 in an Office Action dated 3/14/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 2-4 pages 2-4.

20 Inventors Inoue et al, US Patent 5207426 issued 5/4/1993 was relied upon against Applicant's US Patent application No. 10/042027 in an Office Action dated 12/4/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 2-3 pages 2-4.

20 Inventors Inoue et al, US Patent 5207426 issued 5/4/1993 was relied upon against Applicant's US Patent application No. 09/892430 in an Office Action dated 11/7/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 4 page 3.

20 Inventors Inoue et al, US Patent 5207426 issued 5/4/1993 was relied upon as a PCT "Y" reference (used in obviousness) against Applicant's PCT application No. PCT/US99/28654 in an Office Action dated Sept. 13, 2001 by Examiner J. Paradiso.

20 Inventors Inoue et al, US Patent 5207426 issued 5/4/1993 was relied upon as a PCT “y” reference (used in obviousness) against Applicant’s PCT application No. PCT/US99/28654 in an Office Action dated March 15, 2000 by Examiner L. Libberechth.

21 Inventors Rutledge et al, US Patent 5764219 issued 6/9/1998 was relied upon against applicant’s US patent application 08/942450 in an Office Action dated 8/18/1999. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 2 pages 2- 3.

21 Inventors Rutledge et al, US Patent 5764219 issued 6/9/1998 was relied upon against applicant’s US patent application 10/164684 in an Office Action dated 2/6/2003. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 2 pages 2- 3.

21 Inventors Rutledge et al, US Patent 5764219 issued 6/9/1998 was relied upon against applicant’s US patent application 09/892430 in an Office Action dated 11/7/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 4 page 3.

21 Inventors Rutledge et al, US Patent 5764219 issued 6/9/1998 was relied upon as a PCT “Y” reference (used in obviousness) against applicant’s PCT application PCT/US99/28654 in an Office Action dated Sept. 13, 2001 by Examiner J. Paradiso.

22 The article “Keyboard Switch with Stroke and Feedback Enhancement Using Vertically Conducting Elastomer in a Laterally Conducting Mode” by Kambic , IBM Technical Disclosure Vol. 20, No. 5, pages 1833-1834, (October 1977) was relied upon against applicant’s US patent application 09/106825 in an Office Action dated 4/26/1999. In that Office Action Examiner K. Easthom asserted a 35 USC 102 rejection in section 3 and a 35 USC 103 rejection in section 5 pages 2-3.

22 The article “Keyboard Switch with Stroke and Feedback Enhancement Using Vertically Conducting Elastomer in a Laterally Conducting Mode” by Kambic , IBM Technical Disclosure Vol. 20, No. 5, pages 1833-1834, (October 1977) was relied upon against applicant’s US patent application 09/106825 in an Office Action dated 6/24/1999. In that Office Action Examiner K. Easthom asserted a 35 USC 102 rejection in section 2 and a 35 USC 103 rejection in section 4 page 2.

22 The article “Keyboard Switch with Stroke and Feedback Enhancement Using Vertically Conducting Elastomer in a Laterally Conducting Mode” by Kambic , IBM Technical Disclosure Vol. 20, No. 5, pages 1833-1834, (October 1977) was relied upon against applicant’s US patent application 09/455821 in an Office Action dated 4/19/2000. In that Office Action Examiner K. Easthom asserted a 35 USC 102 rejection in section 5 and a 35 USC 103 rejection in section 7 pages 3-4.

22 The article “Keyboard Switch with Stroke and Feedback Enhancement Using Vertically Conducting Elastomer in a Laterally Conducting Mode” by Kambic , IBM Technical Disclosure Vol. 20, No. 5, pages 1833-1834, (October 1977) was relied upon against applicant’s US patent application 09/710557 in an Office Action dated 5/20/2002. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in section 3 page 3.

23 Inventor Fujita, US Patent 3611068 issued 10/5/1971 was relied upon against applicant’s US patent application 09/106825 in an Office Action dated 4/26/1999. In that Office Action Examiner K. Easthom asserted a 35 USC 103 rejection in section 5 pages 2-3.

23 Inventor Fujita, US Patent 3611068 issued 10/5/1971 was relied upon against applicant’s US patent application 09/106825 in an Office Action dated 6/24/1999. In that Office Action Examiner K. Easthom asserted a 35 USC 103 rejection in section 4 page 2.

24 Inventors Thorne et al, US Patent 5670955 issued 9/23/1997 was relied upon against applicant’s US patent application 09/148806 in an Office Action dated 5/24/2000. In that Office Action Examiner T. Edwards Jr. asserted a 35 USC 103 rejection in sections 2-4 pages 2-12.

25 Inventors Martinelli et al, US Patent 5943044 issued 8/24/1999 was relied upon against applicant’s US patent application 09/148806 in an Office Action dated 5/24/2000. In that Office Action Examiner T. Edwards Jr. asserted a 35 USC 103 rejection in sections 3-4 pages 8-12.

26 Inventor Sellers, US Patent 5995026 issued 11/30/1999 was relied upon against applicant’s US patent application 09/148806 in an Office Action dated 5/24/2000. In that Office Action Examiner T. Edwards Jr. asserted a 35 USC 103 rejection in sections 4 pages 11-12.

27 Inventor Kim, US Patent 5910798 issued 6/8/1999 was relied upon against applicant’s US patent application 09/167314 in an Office Action dated 6/20/2000. In that Office Action Examiner K. Nguyen asserted a 35 USC 103 rejection in sections 2-6 pages 2-3.

27 Inventor Kim, US Patent 5910798 issued 6/8/1999 was relied upon against applicant’s US patent application 09/167314 in an Office Action dated 8/30/2000. In that Office Action Examiner K. Nguyen asserted a 35 USC 103 rejection in sections 4-9 pages 2-4.

28 Inventor Thornburg, US Patent 4313113 issued 1/19/1982 was relied upon against applicant's US patent application 09/167314 in an Office Action dated 6/20/2000. In that Office Action Examiner K. Nguyen asserted a 35 USC 103 rejection in sections 2-6 pages 2-3.

28 Inventor Thornburg, US Patent 4313113 issued 1/19/1982 was relied upon against applicant's US patent application 09/167314 in an Office Action dated 8/30/2000. In that Office Action Examiner K. Nguyen asserted a 35 USC 103 rejection in sections 4-9 pages 2-4.

28 Inventor Thornburg, US Patent 4313113 issued 1/19/1982 was relied upon against applicant's US patent application 09/563109 in an Office Action dated 10/3/2002. In that Office Action Examiner H. Dang asserted a 35 USC 103 rejection in sections 6-7 pages 2-8.

28 Inventor Thornburg, US Patent 4313113 issued 1/19/1982 was relied upon as a PCT "X" reference (lack of novelty indicated by "X") and also as a PCT "Y" reference (used in obviousness) against applicant's PCT application NO. PCT/US00/12840 in a report dated October 13, 2000 by Examiner K. Wieder..

29 Inventors Bertram et al, US Patent 6049812 issued 4/11/2000 was relied upon against applicant's US patent application 09/167314 in an Office Action dated 6/20/2000. In that Office Action Examiner K. Nguyen asserted a 35 USC 103 rejection in sections 6-7 page 3.

29 Inventors Bertram et al, US Patent 6049812 issued 4/11/2000 was relied upon against applicant's US patent application 09/167314 in an Office Action dated 8/30/2000. In that Office Action Examiner K. Nguyen asserted a 35 USC 103 rejection in sections 8-9 page 4.

30 Inventor Asher, US Patent 5689285 issued 11/18/1997 was relied upon against applicant's US Patent application 09/253263 in an Office Action dated 10/4/2000. In that Office Action Examiner T. Mengisteab asserted a 35 USC 103 rejection in sections 4-7 pages 2-6.

30 Inventor Asher, US Patent 5689285 issued 11/18/1997 was relied upon against applicant's US Patent application 09/510572 in an Office Action dated 2/13/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 5 pages 3-4.

30 Inventor Asher, US Patent 5689285 issued 11/18/1997 was relied upon against applicant's US Patent application 09/941310 in an Office Action dated 4/8/2003. In that Office Action Examiner A. Jankus asserted a 35 USC 102 rejection in section 4 pages 2-3.

30 Inventor Asher, US Patent 5689285 issued 11/18/1997 was relied upon as a PCT “Y” reference (used in obviousness) against applicant’s PCT application NO. PCT/US00/33253 in a report dated April 11, 2001 by Examiner J. Paradiso.

30 Inventor Asher, US Patent 5689285 issued 11/18/1997 was relied upon as a PCT “Y” reference (used in obviousness) against applicant’s PCT application NO. PCT/US00/33397 in a report dated April 19, 2001 by Examiner J. Paradiso

31 Inventor Redford, US Patent 5847694 issued 12/8/1998 was relied upon against applicant’s US Patent application 09/253263 in an Office Action dated 10/4/2000. In that Office Action Examiner T. Mengisteab asserted a 35 USC 103 rejection in section 5 page 4.

32 Inventors Gregory et al, US Patent 5264768 issued 11/23/1993 was relied upon against applicant’s US Patent application 09/253263 in an Office Action dated 10/4/2000. In that Office Action Examiner T. Mengisteab asserted a 35 USC 103 rejection in section 6 pages 4-5.

33 Inventors Brandenburg et al, US Patent 5499041 issued 3/12/1996 was relied upon against applicant’s US Patent application 09/253263 in an Office Action dated 10/4/2000. In that Office Action Examiner T. Mengisteab asserted a 35 USC 103 rejection in section 7 pages 5-6.

34 Inventors Engle et al, US Patent 5541622 issued 7/30/1996 was relied upon against applicant’s US Patent application 09/253263 in an Office Action dated 3/27/2001. In that Office Action Examiner A. Jankus asserted a 35 USC 103 rejection in section 2 pages 2-4.

35 Inventor Loop, US Patent 5812114 issued 9/22/1998 was relied upon against applicant’s US Patent application 09/566678 in an Office Action wherein Examiner C. Nguyen asserted a 35 USC 102 rejection in section 2 and a 35 USC 103 rejection in section 4 pages 2-4.

36 Inventors Sayler et al, US Patent 5923317 issued 7/13/1999 was relied upon against applicant’s US Patent application 09/566678 in an Office Action wherein Examiner C. Nguyen asserted a 35 USC 103 rejection in section 4 pages 3-4.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant’s US Patent application 09/568662 in an Office Action dated 3/15/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 8-16 pages 4-11.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/702176 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/699926 in an Office Action dated 3/2/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 6-7 pages 3-4.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/699926 in an Office Action dated 3/12/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 5-7 pages 3-5.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/699799 in an Office Action dated 10/3/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 7-8 pages 4-6.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/699853 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-11 pages 4-6.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/699809 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/699809 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/699809 in an Office Action dated 3/22/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/699854 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/699655 in an Office Action dated 5/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/699826 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-11 pages 4-6.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/702091 in an Office Action dated 2/28/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-11 pages 4-6.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/699816 in an Office Action dated 4/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/733435 in an Office Action dated 4/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 9-11 pages 4-7.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/733468 in an Office Action dated 4/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 9-11 pages 4-6.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/733586 in an Office Action dated 9/21/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 14-16 pages 4-7.

37 Inventors Kobayashi et al, US Patent 5355352 issued 10/11/1994 was relied upon against applicant's US Patent application 09/733437 in an Office Action dated 12/18/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-13 pages 5-7.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/568662 in an Office Action dated 3/15/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 8-16 pages 4-11.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/702176 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/699926 in an Office Action dated 3/2/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 6-7 pages 3-4.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/699926 in an Office Action dated 3/12/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 7 page 5.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/699817 in an Office Action dated 11/30/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-11 pages 4-6.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/699799 in an Office Action dated 10/3/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 7-8 pages 4-6.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/699853 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-11 pages 4-6.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/699809 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/699809 in an Office Action dated 3/22/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 4, 6 pages 3-5.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/699854 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/699655 in an Office Action dated 5/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/699826 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-11 pages 4-6.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/702091 in an Office Action dated 2/28/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-11 pages 4-6

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/699816 in an Office Action dated 4/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-12 pages 4-7.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/733435 in an Office Action dated 4/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 9-11 pages 4-7.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/733468 in an Office Action dated 4/24/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 9-11 pages 4-6.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/733469 in an Office Action dated 5/23/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 9-11 pages 4-7.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/733586 in an Office Action dated 9/21/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 14-16 pages 4-7.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon against applicant's US Patent application 09/733437 in an Office Action dated 12/18/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-13 pages 5-7.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon as a PCT "Y" reference (used in obviousness) against applicant's PCT application No. PCT/US00/33253 in an Office Action dated April 11, 2001 by Examiner J. Paradiso.

38 Inventors O'Mara et al, US Patent 5510812 issued 4/23/1996 was relied upon as a PCT "Y" reference (used in obviousness) against applicant's PCT application No. PCT/US00/33397 in an Office Action dated April 19, 2001 by Examiner J. Paradiso.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/568662 in an Office Action dated 3/15/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 9 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/702176 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/699926 in an Office Action dated 3/2/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 7 page 4.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/699817 in an Office Action dated 11/30/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/699799 in an Office Action dated 10/3/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 8 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/699853 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/699809 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/699854 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/699655 in an Office Action dated 5/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/699826 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/702091 in an Office Action dated 2/28/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/699816 in an Office Action dated 4/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 11-12 pages 6-7.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/733435 in an Office Action dated 4/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-11 pages 6-7.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/733468 in an Office Action dated 4/24/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-11 pages 5-6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/733469 in an Office Action dated 5/23/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 10 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/733586 in an Office Action dated 9/21/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 15 page 6.

39 Inventor Lynch, US Patent 5365494 issued 11/15/1994 was relied upon against applicant's US Patent application 09/733437 in an Office Action dated 12/18/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 page 6.

40 Inventor Kane, US Patent 6112014 issued 8/29/2000 was relied upon against applicant's US Patent application 09/568662 in an Office Action dated 3/15/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 10 page 7.

41 Inventor Mason, US Patent 4158759 issued 6/19/1979 was relied upon against applicant's US Patent application 09/568662 in an Office Action dated 3/15/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 pages 7-8.

41 Inventor Mason, US Patent 4158759 issued 6/19/1979 was relied upon against applicant's US Patent application 09/733435 in an Office Action dated 4/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 page 7.

42 Inventor Oota, US Patent 4406217 issued 9/27/1983 was relied upon against applicant's US Patent application 09/568662 in an Office Action dated 3/15/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 12 page 8.

42 Inventor Oota, US Patent 4406217 issued 9/27/1983 was relied upon against applicant's US Patent application 09/699816 in an Office Action dated 4/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 12 page 7.

42 Inventor Oota, US Patent 4406217 issued 9/27/1983 was relied upon against applicant's US Patent application 09/733468 in an Office Action dated 4/24/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 page 6.

43 Inventors Sudo et al, US Patent 6198948 issued 3/6/2001 was relied upon against applicant's US Patent application 09/568662 in an Office Action dated 3/15/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 13 pages 8-9.

43 Inventors Sudo et al, US Patent 6198948 issued 3/6/2001 was relied upon against applicant's US Patent application 09/600655 in an Office Action dated 5/25/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 12 page 7.

44 Inventors Whalen et al, US Patent 5948066 issued 9/7/1999 was relied upon against applicant's US Patent application 09/568662 in an Office Action dated 3/15/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 14 page 9.

44 Inventors Whalen et al, US Patent 5948066 issued 9/7/1999 was relied upon against applicant's US Patent application 09/699854 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 12 page 7.

45 Inventors Yoshikawa et al, US Patent 5847305 issued 12/8/1998 was relied upon against applicant's US Patent application 09/568662 in an Office Action dated 3/15/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 15 page 10.

45 Inventors Yoshikawa et al, US Patent 5847305 issued 12/8/1998 was relied upon against applicant's US Patent application 09/699809 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 12 page 7.

45 Inventors Yoshikawa et al, US Patent 5847305 issued 12/8/1998 was relied upon against applicant's US Patent application 09/699809 in an Office Action dated 3/22/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 3-6 pages 2-5.

46 Inventor Powell, US Patent 6118979 issued 9/12/2000 was relied upon against applicant's US Patent application 09/568662 in an Office Action dated 3/15/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 16 pages 10-11.

46 Inventor Powell, US Patent 6118979 issued 9/12/2000 was relied upon against applicant's US Patent application 09/702176 in an Office Action dated 3/14/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 12 page 7.

47 Inventors Goto et al, US Patent 6231444 issued 5/15/2001 was relied upon against applicant's US Patent application 09/551513 in an Office Action dated 9/25/2001. In that Office Action Examiner S. Ashburn asserted a 35 USC 102 rejection on page 4.

47 Inventors Goto et al, US Patent 6231444 issued 5/15/2001 was relied upon against applicant's US Patent application 09/627564 in an Office Action dated 9/26/2001. In that Office Action Examiner S. Ashburn asserted a 35 USC 102 rejection on page 4.

47 Inventors Goto et al, US Patent 6231444 issued 5/15/2001 was relied upon against applicant's US Patent application 09/721848 in an Office Action dated 5/20/2002. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in section 5 on pages 4-5.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 09/702176 in an Office Action dated 3/13/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 4-5 on pages 3-4.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 09/699926 in an Office Action dated 3/12/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 5-7 on pages 3-5.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 09/699853 in an Office Action dated 1/17/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 4-5, 7 on pages 3-5.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 09/699809 in an Office Action dated 3/22/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 3-6 on pages 2-5.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 1/9/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 102 rejection and a 35 USC 103 rejection on pages 2-10.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 9/25/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 102 rejection and a 35 USC 103 rejection on pages 3-6.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 09/551513 in an Office Action

dated 8/27/2003. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on pages 4-6.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 09/955838 in an Office Action dated 5/3/2002. In that Office Action Examiner K. Easthom asserted a 35 USC 102 rejection in section 5 and a 35 USC 103 rejection in section 7 on pages 4-5.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 09/955838 in an Office Action dated 7/12/2002. In that Office Action Examiner K. Easthom asserted a 35 USC 102 rejection in section 6 on page 4.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 10/042027 in an Office Action dated 3/14/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 3-4 on pages 2-4.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 10/042027 in an Office Action dated 12/4/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 2-3 on pages 2-4.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 09/896680 in an Office Action dated 7/31/2003. In that Office Action Examiner A. Enatsky asserted a 35 USC 102 rejection and a 35 USC 103 rejection on pages 2-5.

48 Unexamined Japanese patent document No. JP 5-87760 naming Furukawa as Inventor published 11/26/1993 was relied upon against applicant's US patent application no. 10/329142 in an Office Action dated 6/12/2003. In that Office Action Examiner S. Jones asserted a 35 USC 103 rejection in section 10 on pages 5-9.

49 Inventor LaDue, US Patent 5999808 issued 12/7/1999 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 1/9/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 102 rejection on pages 3-4.

50 Inventor Park, US Patent 5315204 issued 5/24/1994 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 1/9/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on pages 5-7.

50 Inventor Park, US Patent 5315204 issued 5/24/1994 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 9/25/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on page 3.

50 Inventor Park, US Patent 5315204 issued 5/24/1994 was relied upon against applicant's PCT application no. PCT/US99/28914 in an Office Action dated April 26, 2000. In that Action Park was relied upon as a PCT "X" reference (lack of novelty indicated by "X") and also as a PCT "Y" reference (used in obviousness) by Examiner M. Zambuto.

51 Inventor Okada, US Patent 5184830 issued 2/9/1993 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 1/9/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on page 7.

51 Inventor Okada, US Patent 5184830 issued 2/9/1993 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 9/25/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on page 3.

51 Inventor Okada, US Patent 5184830 issued 2/9/1993 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 8/27/2003. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on pages 2-6.

52 Inventor Chiang, US Patent 5294121 issued 3/15/1994 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 1/9/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on pages 7-8.

52 Inventor Chiang, US Patent 5294121 issued 3/15/1994 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 9/25/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on page 4.

53 Inventor Hasiguchi, US Patent 5552799 issued 9/3/1996 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 1/9/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on pages 8-9.

53 Inventor Hasiguchi, US Patent 5552799 issued 9/3/1996 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 9/25/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on page 4.

54 Inventor Sato, US Patent 4858930 issued 8/22/1989 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 1/9/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on pages 8-9.

54 Inventor Sato, US Patent 4858930 issued 8/22/1989 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 9/25/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on page 4.

55 Inventors Okada et al, US Patent 5396225 issued 3/7/1995 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 9/25/2002. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on pages 5-6.

56 Inventor Hahn, US Patent 6027828 issued 2/22/2000 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 8/27/2003. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on pages 2-6.

57 Inventor Souliere, US Patent 5389757 issued 2/14/1995 was relied upon against applicant's US patent application no. 09/551513 in an Office Action dated 8/27/2003. In that Office Action Examiner S. Ashburn asserted a 35 USC 103 rejection on page 6.

58 Inventor Kramer, US Patent 5164697 issued 11/17/1992 was relied upon against applicant's US patent application no. 09/455821 in an Office Action dated 4/19/2000. In that Office Action Examiner K. Easthom asserted a 35 USC 103 rejection in section 7 on pages 3-4.

58 Inventor Kramer, US Patent 5164697 issued 11/17/1992 was relied upon against applicant's US patent application no. 09/455821 in an Office Action dated 5/3/2002. In that Office Action Examiner K. Easthom asserted a 35 USC 102 rejection in section 5 and also a 35 USC 103 rejection in section 7 on pages 4-5.

59 Inventors Murata et al, GB patent document No. GB 2113920 published 8/10/1983 was relied upon against applicant's US patent application no. 09/455821 in an Office Action dated 4/19/2000. In that Office Action Examiner K. Easthom asserted a 35 USC 103 rejection in section 7 on pages 3-4.

60 Inventors Minelli et al, US Patent 5564560 issued 10/15/1996 was relied upon against applicant's US patent application no. 10/042027 in an Office Action dated 3/14/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 4 on page 4.

60 Inventors Minelli et al, US Patent 5564560 issued 10/15/1996 was relied upon against applicant's US patent application no. 10/042027 in an Office Action dated 12/4/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 3 on page 4.

60 Inventors Minelli et al, US Patent 5564560 issued 10/15/1996 was relied upon against applicant's US patent application no. 09/702176 in an Office Action dated 3/13/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 5 on page 4.

60 Inventors Minelli et al, US Patent 5564560 issued 10/15/1996 was relied upon against applicant's US patent application no. 09/699926 in an Office Action dated 3/12/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 6-7 on pages 4-5.

60 Inventors Minelli et al, US Patent 5564560 issued 10/15/1996 was relied upon against applicant's US patent application no. 09/699809 in an Office Action dated 3/22/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 5-6 on pages 4-5.

61 Japanese unexamined patent document No. JP 7-302159 published 11/14/1995 naming Inventors Terajima et al was relied upon against applicant's US patent application no. 09/896680 in an Office Action dated 7/31/2003. In that Office Action Examiner A. Enatsky asserted a 35 USC 103 rejection on pages 4-5.

61 Japanese unexamined patent document No. JP 7-302159 published 11/14/1995 naming Inventors Terajima et al was relied upon against applicant's US patent application no. 10/329142 in an Office Action dated 6/12/2003. In that Office Action Examiner S. Jones asserted a 35 USC 103 rejection in section 10 on pages 5-9.

62 Inventor Chandler, US Patent 4246452 issued 1/20/1981 was relied upon against applicant's US patent application no. 09/721848 in an Office Action dated 12/5/2001. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in sections 2-4 on pages 2-4.

62 Inventor Chandler, US Patent 4246452 issued 1/20/1981 was relied upon against applicant's US patent application no. 09/721848 in an Office Action dated 5/20/2002. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in sections 2-4 on pages 2-4.

63 Inventor Culver, US Patent 6256011 issued 7/3/2001 was relied upon against applicant's US patent application no. 09/721848 in an Office Action dated 12/5/2001. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in sections 2-4 on pages 2-4.

63 Inventor Culver, US Patent 6256011 issued 7/3/2001 was relied upon against applicant's US patent application no. 09/721848 in an Office Action dated 5/20/2002. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in sections 2-4 on pages 2-4.

64 Inventor Loper, US Patent 5203563 issued 4/20/1993 was relied upon against applicant's US patent application no. 09/721848 in an Office Action dated 12/5/2001. In that Office Action Examiner D. Chow asserted a 35 USC 102 rejection in section 6 and a 35 USC 103 in section 7 on pages 4-5.

64 Inventor Loper, US Patent 5203563 issued 4/20/1993 was relied upon against applicant's US patent application no. 09/710557 in an Office Action dated 12/4/2001. In that Office Action Examiner D. Chow asserted a 35 USC 102 rejection in section 4 and a 35 USC 103 in sections 2,5 on pages 2-4.

65 Inventors Kobachi et al, US Patent 6326948 issued 12/4/2001 was relied upon against applicant's US patent application no. 09/721848 in an Office Action dated 5/20/2002. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in section 5 on pages 4-5.

66 Inventors Ogata et al, US Patent 6001014 issued 12/14/1999 was relied upon against applicant's US patent application no. 09/710557 in an Office Action dated 5/20/2002. In that Office Action Examiner D. Chow asserted a 35 USC 103 rejection in sections 2-3 on pages 2-3.

67 Inventors Straayer et al, US Patent 4680577 issued 7/14/1987 was relied upon against applicant's US patent application no. 09/941310 in an Office Action dated 4/8/2003. In that Office Action Examiner A. Jankus asserted a 35 USC 102 rejection in section 3 on pages 2-3.

68 Inventors Ganuchau et al, US Patent 5543781 issued 8/6/1996 was relied upon against applicant's US patent application no. 09/702176 in an Office Action dated 3/13/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 4-5 on pages 3-4.

69 Inventors DeLorme et al, US Patent 6321158 issued 11/20/2001 was relied upon against applicant's US patent application no. 09/702176 in an Office Action dated 3/13/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 4 on page 3.

69 Inventors DeLorme et al, US Patent 6321158 issued 11/20/2001 was relied upon against applicant's US patent application no. 09/699853 in an Office Action dated 1/17/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 4-5, 7 on pages 3-5.

70 Inventors Coleman et al, US Patent 5327201 issued 7/5/1994 was relied upon against applicant's US patent application no. 09/699817 in an Office Action dated 11/30/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in sections 10-11 on pages 4-6.

71 Inventor Kunert, US Patent 6177926 issued 1/23/2001 was relied upon against applicant's US patent application no. 09/699853 in an Office Action dated 11/17/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 5 on page 4.

72 Inventors McKee et al, US Patent 6262406 issued 7/17/2001 was relied upon against applicant's US patent application no. 09/702239 in an Office Action dated 12/1/2002. In that Office Action Examiner J. Paradiso asserted a 35 USC 102 rejection in section 10 on page 4.

73 Inventors Butts et al, US Patent 5345807 issued 9/13/1994 was relied upon against applicant's US patent application no. 09/702239 in an Office Action dated 7/30/2003. In that Office Action Examiner A. Enatsky asserted a 35 USC 102 rejection and also a 35 USC 103 rejection on pages 2-3.

73 Inventors Butts et al, US Patent 5345807 issued 9/13/1994 was relied upon against applicant's US patent application no. 09/733468 in an Office Action dated 8/26/2003. In that Office Action Examiner A. Enatsky asserted a 35 USC 102 rejection and also a 35 USC 103 rejection on pages 3-4.

74 Inventor McCusker, US Patent 5399823 issued 3/21/1995 was relied upon against applicant's US patent application no. 09/733468 in an Office Action dated 8/26/2003. In that Office Action Examiner A. Enatsky asserted a 35 USC 103 rejection on pages 3-4.

75 Inventors Kondur et al, US Patent 3993884 issued 11/23/1976 was relied upon against applicant's US patent application no. 09/733468 in an Office Action dated 8/26/2003. In that Office Action Examiner A. Enatsky asserted a 35 USC 103 rejection on pages 3-4.

76 Inventor Burrell, US Patent 5910882 issued 6/8/1999 was relied upon against applicant's US patent application no. 09/733469 in an Office Action dated 5/23/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 11 on page 7.

77 Inventors Takamiya et al, US Patent 4133012 issued 1/2/1979 was relied upon against applicant's US patent application no. 09/733586 in an Office Action dated 9/21/2001. In that Office Action Examiner J. Paradiso asserted a 35 USC 103 rejection in section 16 on page 7.

78 Inventors Shaw et al, US Patent 5983004 issued 11/9/1999 was relied upon against applicant's US patent application no. 09/733437 in an Office Action dated 12/18/2001. In that Office Examiner Action J. Paradiso asserted a 35 USC 103 rejection in section 12 on page 7.

79 Inventors Glassgold et al, US Patent 5781807 issued 7/14/1998 was relied upon against applicant's US application no. 09/733437 in an Office Action dated 12/18/2001. In that Office Examiner J. Paradiso asserted a 35 USC 103 rejection in section 13 on page 7.

80 Inventor Mitchell, US Patent 3806471 issued 4/23/1974 was relied upon against applicant's PCT application no. PCT/US99/28654 in an Office Action dated March 15, 2000. In that Office Examiner L. Libberechth asserted that the US Patent 3806471 reference was a PCT "Y" type reference (used in obviousness).

81 Assignee Nintendo, patent document EP0470615 published was relied upon against applicant's PCT application no. PCT/US99/28654 in an Office Action dated March 15, 2000. In that Office Examiner L. Libberechth asserted that the EP0470615 reference was a PCT "Y" type reference (used in obviousness).

82 Assignee Thomson Brandt, patent document DE3542890 published June 19, 1987 was relied upon against applicant's PCT application no. PCT/US99/28654 in an Office Action dated March 15, 2000. In that Office Examiner L. Libberechth asserted that the DE3542890 reference was a PCT "Y" type reference (used in obviousness).

83 Inventor Brown, US Patent 5440237 issued 8/8/1995 was relied upon against applicant's PCT application no. PCT/US99/28914 in an Office Action dated April 26, 2000. In that Office Examiner M. Zambuto asserted that the 5440237 reference was a PCT "Y" type reference (used in obviousness).

84 Assignee Texas Instruments, patent document EP0579448 published January 19, 1994 was relied upon against applicant's PCT application no. PCT/US99/28914 in an Office Action dated April 26, 2000.

In that Office Examiner M. Zambuto asserted that the EP0579448 reference was a PCT “Y” type reference (used in obviousness).

85 Inventor Hilton, US Patent 5222400 issued June 29, 1993 was relied upon against applicant’s PCT application no. PCT/US99/28913 in an Office Action dated May 26, 2000. In that Office Examiner M. . Baldan asserted that the 5222400 reference was a PCT “Y” type reference (used in obviousness).

86 Inventor Gobeli, US Patent 4536746 issued August 20, 1985 was relied upon against applicant’s PCT application no. PCT/US99/28913 in an Office Action dated May 26, 2000. In that Office Examiner M. . Baldan asserted that the 4536746 reference was a PCT “Y” type reference (used in obviousness).

87 Inventor Armstrong, US Patent 5589828 issued Dec. 31, 1996 was relied upon against applicant’s PCT application no. PCT/US99/28913 in an Office Action dated April 19, 2002. In that Office Action Examiner J. Brier asserted that the 5589828 reference was a PCT “X” type (lack of novelty indicated by “X”) and also a PCT “Y” type reference (used in obviousness).

88 Inventor Armstrong, US Patent 5565891 issued Oct. 15, 1996 was relied upon against applicant’s PCT application no. PCT/US99/28913 in an Office Action dated April 19, 2002. In that Office Action Examiner J. Brier asserted that the 5589828 reference was a PCT “X” type reference (lack of novelty indicated by “X”).

89 Assignee Synaptics, patent document WO9718508 published May 22, 1997 was relied upon against applicant’s PCT application no. PCT/US99/28956 in an Office Action dated April 27, 2000. In that Office Action Examiner P. Pham asserted that the WO9718508 reference was a PCT “X” type (lack of novelty indicated by “X”).

90 Inventors Maeshima et al, US Patent 5396235 issued March 7, 1995 was relied upon against applicant’s PCT application no. PCT/US00/12840 in an Office Action dated Oct. 13, 2000. In that Office Action Examiner K. Wieder asserted that the 5396235 reference was a PCT “Y” type reference (used in obviousness).

91 Inventor Bersheim, US Patent 4491325 issued 1/1/1985 was relied upon against applicant’s US patent application no. 08/707478 in an Office Action dated 5/30/1997. In that Office Action Examiner A. Wong asserted a 35 USC 102 rejection in section 3 and also a 35 USC 103 rejection in sections 6-8 on pages 2-5.

92 Inventor Thomas, US Patent 4604502 issued 8/5/1986 was relied upon against applicant's US patent application no. 08/707478 in an Office Action dated 5/30/1997. In that Office Action Examiner A. Wong asserted a 35 USC 103 rejection in section 7 on pages 4-5.

93 Inventor Corballis, US Patent 5512892 issued 4/30/1996 was relied upon against applicant's US patent application no. 08/707478 in an Office Action dated 5/30/1997. In that Office Action Examiner A. Wong asserted a 35 USC 103 rejection in section 6 on page 4.

94 Inventor Tano, US Patent 4909514 issued 3/20/1990 was relied upon against applicant's US patent application no. 08/707478 in an Office Action dated 5/30/1997. In that Office Action Examiner A. Wong asserted a 35 USC 102 rejection in section 4 and also a 35 USC 103 rejection in section 7 on pages 3-5.

95. Inventor Adan et al, US Patent Publication 2002/0036660 published Mar. 28, 2002 was relied upon against applicant's US patent application no. 09/754477 in an Office Action dated 09/25/2003. In that Office Action Examiner K. Nguyen asserted a 35 USC 102 rejection in section 7 and also a 35 USC 103 rejection in section 9 on pages 4-6.

96. Inventor Nassimi, US Patent 5,790,102 issued Aug. 4, 1998 was relied upon against applicant's US patent application no. 09/754477 in an Office Action dated 09/25/2003. In that Office Action Examiner K. Nguyen asserted a 35 USC 102 rejection in section 5 and also a 35 USC 103 rejection in section 9 on pages 4-6.

97. Inventor Poulson of German Patent DE4013227 published 05/29/1991 is of interest and therefore Applicant is mentioning Poulson. The Poulson figures 2 and 3 joy stick 3 is a vertically structured element. Poulson includes a motor and offset weight for providing active tactile feedback to the user.